



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,793	12/31/2001	Kenji Sugiyama	0102/0191	5666
21395	7590	04/01/2005	EXAMINER	
LOUIS WOO LAW OFFICE OF LOUIS WOO 717 NORTH FAYETTE STREET ALEXANDRIA, VA 22314			TORRES, JUAN A	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,793

Applicant(s)

SUGIYAMA, KENJI

Examiner

Juan A. Torres

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the:

a) The “**means for**” getting information about a frame pixel number of the previously-mentioned incoming bit stream, and setting a decoding picture rate of a moving picture from a relation between the previously-mentioned frame pixel number and a decoding processing capability; the decoding “**means for**” causing at least a portion of bidirectional inter-picture prediction pictures in the previously-mentioned incoming bit stream to be not decoded, and performing decoding of the previously-mentioned incoming bit stream at the previously-mentioned coding picture rate to get decoded pictures; and the interpolating “**means for**” interpolating a picture of the previously-mentioned decoded pictures to get a reproduced picture at a prescribed picture rate.

b) The decoding controlling “**means for**” getting information about a frame pixel number of the previously-mentioned incoming bit stream, and setting a decoding method not decoding all bidirectional inter-picture prediction pictures in the previously-mentioned incoming bit stream in cases where decoding of bidirectional inter-picture prediction pictures in the previously-mentioned incoming bit stream can not be done

from a relation between the previously-mentioned frame pixel number and a capacity of a frame memory for decoding which will be mentioned later; decoding **“means for”** decoding the incoming bit stream in accordance with the previously-mentioned decoding method to get decoded pictures; and a frame memory for decoding which uses a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the previously-mentioned decoding method, and getting a prescribed reproduced picture from the previously-mentioned decoded pictures.

c). A **“method”** of reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, characterized by comprising the steps of: getting information about a frame pixel number of the previously-mentioned incoming bit stream, and setting a decoding picture rate of a moving picture from a relation between the previously-mentioned frame pixel number and a decoding processing capability; causing at least a portion of bidirectional inter-picture prediction pictures in the previously-mentioned incoming bit stream to be not decoded, and performing decoding of the previously-mentioned incoming bit stream at the previously-mentioned set coding picture rate to get decoded pictures; and interpolating a picture of the previously-mentioned gotten decoded pictures to get a reproduced picture at a prescribed picture rate.

d) A **“method”** of reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, characterized

by comprising the steps of: getting information about a frame pixel number of the previously-mentioned incoming bit stream, and setting a decoding method not decoding all bidirectional inter-picture prediction pictures in the previously-mentioned incoming bit stream in cases where decoding of bidirectional inter-picture prediction pictures in the previously-mentioned incoming bit stream can not be done from a relation between the previously-mentioned frame pixel number and a capacity of a frame memory for decoding which will be mentioned later; decoding the incoming bit stream in accordance with the previously-mentioned decoding method to get decoded pictures; and getting a prescribed reproduced picture from the previously-mentioned gotten decoded pictures by a frame memory for decoding which uses a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the previously-mentioned decoding method.

Must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

a) In page 4 line 6 the recitation "a capacity of a frame memory for decoding which will be mentioned later " is suggested to be changed to "a capacity of a frame memory for decoding".

b) In page 5 line 19 the recitation "a capacity of a frame memory for decoding which will be mentioned later " is suggested to be changed to "a capacity of a frame memory for decoding".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 2 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As per claim 1, the specification doesn't disclose the **"means for"** getting information about a frame pixel number of the previously-mentioned incoming bit stream, and setting a decoding picture rate of a moving picture from a relation between the previously-mentioned frame pixel number and a decoding processing capability; the decoding **"means for"** causing at least a portion of bidirectional inter-picture prediction pictures in the previously-mentioned incoming bit stream to be not decoded, and performing decoding of the previously-mentioned incoming bit stream at the previously-mentioned coding picture rate to get decoded pictures; and the interpolating **"means for"** interpolating a picture of the previously-mentioned decoded pictures to get a reproduced picture at a prescribed picture rate.

As per claim 2, the specification doesn't disclose the decoding controlling **"means for"** getting information about a frame pixel number of the previously-mentioned incoming bit stream, and setting a decoding method not decoding all bidirectional inter-picture prediction pictures in the previously-mentioned incoming bit stream in cases where decoding of bidirectional inter-picture prediction pictures in the previously-mentioned incoming bit stream can not be done from a relation between the previously-mentioned frame pixel number and a capacity of a frame memory for decoding which will be mentioned later; decoding **"means for"** decoding the incoming bit stream in accordance with the previously-mentioned decoding method to get decoded pictures;

and a frame memory for decoding which uses a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the previously-mentioned decoding method, and getting a prescribed reproduced picture from the previously-mentioned decoded pictures.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 2 in line 13 of claim 2 the recitation "capacity of a frame memory for decoding which will be mentioned later" is vague and indefinite because it is not clear where the capacity of a frame memory for decoding is mention later.

As per claim 4 in line 12 of claim 4 the recitation "capacity of a frame memory for decoding which will be mentioned later" is vague and indefinite because it is not clear where the capacity of a frame memory for decoding is mention later.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US 6754274) and further in view of Mishima (US 6549717).

As per claim 1, Park discloses a variable picture rate decoding apparatus for reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, characterized by comprising picture rate setting means for getting information about a frame pixel number of the previously-mentioned incoming bit stream, and setting a decoding picture rate of a moving picture from a relation between the frame pixel number and a decoding processing capability (figure 4 block 10 and figure 5 block 201 column 5 lines 4-8); decoding means for causing at least a portion of bidirectional inter-picture prediction pictures in the incoming bit stream to be not decoded, and performing decoding of the incoming bit stream at the coding picture rate to get decoded pictures (figure 4 block 10 and figure 5 blocks 205 and 208 column 5 lines 17-25 and lines 35-39). Park doesn't disclose the interpolating means for interpolating a picture of the decoded pictures to get a reproduced picture at a prescribed picture rate. Mishima discloses interpolating means for interpolating a picture of the decoded pictures to get a reproduced picture at a prescribed picture rate (figure 30 column 36 lines 46-54). Park and Mashima are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the interpolation disclosed by Mashima in the decoding apparatus disclosed by Park. The suggestion/motivation for doing so would have been to obtain produce an output picture when the input data

cannot be decoded (Mashima abstract). Therefore, it would have been obvious to combine Park and Mashima to obtain the invention as specified in claim 1.

As per claim 3, Park discloses a variable picture rate decoding method of reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, characterized by comprising the steps of: getting information about a frame pixel number of the incoming bit stream, and setting a decoding picture rate of a moving picture from a relation between the frame pixel number and a decoding processing capability (figure 4 block 10 and figure 5 block 201 column 5 lines 4-8); causing at least a portion of bidirectional inter-picture prediction pictures in the incoming bit stream to be not decoded, and performing decoding of the incoming bit stream at the set coding picture rate to get decoded pictures (figure 4 block 10 and figure 5 blocks 205 and 208 column 5 lines 17-25 and lines 35-39). Park doesn't disclose interpolating a picture of the decoded pictures to get a reproduced picture at a prescribed picture rate. Mishima discloses interpolating a picture of the decoded pictures to get a reproduced picture at a prescribed picture rate. (figure 30 column 36 lines 46-54). Park and Mashima are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the interpolation disclosed by Mashima in the decoding method disclosed by Park. The suggestion/motivation for doing so would have been to obtain produce an output picture when the input data cannot be decoded (Mashima abstract). Therefore, it would have been obvious to combine Park and Mashima to obtain the invention as specified in claim 3.

Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US 6754274) and further in view of Kurihara (US 5841475).

As per claim 2 Park discloses a variable picture rate decoding apparatus for reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, characterized by comprising decoding controlling means for getting information about a frame pixel number of the incoming bit stream, and setting a decoding method not decoding all bidirectional inter-picture prediction pictures in the incoming bit stream in cases where decoding of bidirectional inter-picture prediction pictures in the incoming bit stream can not be done from a relation between the frame pixel number and a capacity of a frame memory for decoding (figure 4 block 10 and figure 5 blocks 205 and 208 column 5 lines 17-25 and lines 35-39); decoding means for decoding the incoming bit stream in accordance with the decoding method to get decoded pictures (figure 4 block 30 and figure 5 blocks 206 column 5 lines 26-27 and lines 40-49). Park doesn't disclose a frame memory for decoding which uses a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the decoding method, and getting a prescribed reproduced picture from the decoded pictures. Kurihara discloses a frame memory for decoding which uses a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the decoding method, and getting a prescribed reproduced picture from the decoded

pictures (figure 5 block 11, 12, 27 and 28 column 8 lines 37-60). Park and Kurihara are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the memory disclosed by Kurihara in the decoding method disclosed by Park. The suggestion/motivation for doing so would have been to reduce the memory capacity in the case where restored image data of a B-picture are outputted in interlacing (Kurihara abstract). Therefore, it would have been obvious to combine Park and Kurihara to obtain the invention as specified in claim 2.

As per claim 4 Park discloses a variable picture rate decoding method of reproducing a moving picture from an incoming bit stream coded by inter-picture predictive coding including bidirectional prediction, characterized by comprising the steps of getting information about a frame pixel number of the incoming bit stream, and setting a decoding method not decoding all bidirectional inter-picture prediction pictures in the incoming bit stream in cases where decoding of bidirectional inter-picture prediction pictures in the incoming bit stream can not be done from a relation between the frame pixel number and a capacity of a frame memory for decoding (figure 4 block 10 and figure 5 blocks 205 and 208 column 5 lines 17-25 and lines 35-39); decoding the incoming bit stream in accordance with the decoding method to get decoded pictures (figure 4 block 30 and figure 5 blocks 206 column 5 lines 26-27 and lines 40-49). Park doesn't disclose getting a prescribed reproduced picture from the decoded pictures by a frame memory for decoding using a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in

pixel number in cases where bidirectional prediction is not done in accordance with the decoding method. Kurihara getting a prescribed reproduced picture from the decoded pictures by a frame memory for decoding using a memory corresponding to 4 frames when bidirectional prediction is done as a memory corresponding to two frames double in pixel number in cases where bidirectional prediction is not done in accordance with the decoding method (figure 5 block 11, 12, 27 and 28 column 8 lines 37-60). Park and Kurihara are analogous art because they are from the same field of endeavor. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the memory disclosed by Kurihara in the decoding method disclosed by Park. The suggestion/motivation for doing so would have been to reduce the memory capacity in the case where restored image data of a B-picture are outputted in interlacing (Kurihara abstract). Therefore, it would have been obvious to combine Park and Kurihara to obtain the invention as specified in claim 4.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAT
3-10-2005



STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2631